

IN THE CLAIMS:

Claims 1-24 (Canceled).

Claim 25 (Currently Amended): An intracellular-reaction measuring apparatus for measuring intracellular reactions by the use of a specimen in which a plurality of cells which stand adherent to one another, are contained, the apparatus comprising:

~~specifying means in which the intensity of first light emitted from the specimen in accordance with the presence of a stated protein is detected to specify, as a noted region of said specimen, a region in which a cell(s) emitting said first light is(are) contained, in a higher proportion than a stated standard, and in which the a cell(s) emitting said first light and a cell(s) emitting no first light are present; and~~

~~selection means in which the intensity of second light emitted from the specimen in accordance with intracellular reactions induced by the protein is detected to select, of the detected intensity of the second light, the intensity of the second light emitted from said noted region.~~

photo-detecting means which detects the intensity of first light emitted from said cells in accordance with the presence of a stated protein and the intensity of second light emitted from said cells notwithstanding that a stated protein is present or not therein;

a first extracting member that extracts expressed cells emitting said first light on the basis of a detection signal of said first light detected by said photo-detecting means;

a second extracting member that extracts all cells emitting said second light;

a specifying member that specifies a cell region containing said expressed cells extracted by the first extracting member with a higher proportion than a stated standard among said all cells extracted by the second extracting member, which includes cells not having the stated protein; and

an analyzing member which analyzes said intracellular reactions on the basis of the detected signal, which is detected by said photo-detecting means, of said second light emitted from said cell region specified by the specifying member;

wherein said analyzing member analyzes said intracellular reactions, using the second light emitted from said cells in which said stated protein is present and the second light emitted in accordance with intracellular reactions induced by the stated protein from said cells in which said stated protein is not present.

Claim 26 (Previously Presented): The intracellular-reaction measuring apparatus according to claim 25, further comprising:

a chemical-substance introduction means for introducing into said cells chemical substances which target said protein.

Claim 27 (Currently Amended): The intracellular-reaction measuring apparatus according to claim 25, wherein

~~said selection means detects the intensity of said second light at intervals of a constant time to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted region~~

the second extracting member extracts said all cells on the basis of the detected signal of said second light detected by said photo-detecting means.

Claim 28 (Currently Amended): The intracellular-reaction measuring apparatus according to claim 26 25, wherein

~~said specifying means detects as the intensity of said first light the intensity of first light emitted from a fluorescent protein expressed together with said protein, to specify said noted region; and~~

~~said selection means detects the intensity of second light emitted from a fluorescent probe for measuring intracellular reactions, introduced into said specimen, to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted region, as the intensity of said second light~~

the second extracting member extracts said all cells from a picture image of said sample captured by a phase-contrast microscope.

Claim 29 (Currently Amended): The intracellular-reaction measuring apparatus according to claim 26 25, wherein

~~said apparatus further comprises:~~

~~detection means for detecting the timing at which said chemical substances are introduced into said specimen; and~~

~~said selection means detects the intensity of said second light at least twice, before said chemical substances are introduced and after a certain time after said chemical substances have been introduced, to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted region~~

said photo-detecting means is a cooled imaging device, said cooled imaging device captures a fluorescent image by detecting fluorescence from said cells, and said first and second extracting members extract cells on the basis of brightness information of said fluorescent image.

Claim 30 (Currently Amended): An intracellular-reaction measuring apparatus for measuring intracellular reactions by the use of a specimen in which a plurality of cells are contained, as a plurality of cell colonies in a non-contact state, the apparatus comprising:

~~specifying means in which the intensity of first light emitted from the specimen in accordance with the presence of a stated protein is detected to specify, as a noted region, a cell colony in which a cell(s) emitting said first light and a cell(s) emitting no first light are present; and~~

~~selection means in which the intensity of second light emitted from the specimen in accordance with intracellular reactions induced by the protein is detected to select, of the detected intensity of the second light, the intensity of the second light emitted from said noted region.~~

photo-detecting means which detects the intensity of first light emitted from said cells in accordance with the presence of a stated protein and the intensity of second light emitted from said cells notwithstanding that a stated protein is present or not therein;
a first extracting member that extracts expressed cells emitting said first light on the basis of a detection signal of said first light detected by said photo-detecting means;
a second extracting member that extracts all cell colonies emitting said second light;
a specifying member that specifies a cell colony containing said expressed cells extracted by the first extracting member with a higher proportion than a stated standard among said all cell colonies extracted by the second extracting member, which includes cells not having the stated protein; and
an analyzing member which analyzes said intracellular reactions on the basis of the detected signal, which is detected by said photo-detecting means, of said second light emitted from said cell colonies specified by the specifying member;
wherein said analyzing member analyzes said intracellular reactions, using the second light emitted from said cells in which said stated protein is present and the second light emitted in accordance with intracellular reactions induced by the stated protein from said cells in which said stated protein is not present.

Claim 31 (Previously Presented): The intracellular-reaction measuring apparatus according to claim 30, further comprises a chemical-substance introduction device for introducing into said cells chemical substances which target said protein.

Claim 32 (Canceled).

Claim 33 (Currently Amended): The intracellular-reaction measuring apparatus according to claim 30, wherein

~~said selection means detects the intensity of said second light at intervals of a constant time to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted region~~

said second extracting member extracts said all cell colonies on the basis of the detection signal of the second light detected by said photo-detecting means.

Claim 34 (Currently Amended): The intracellular-reaction measuring apparatus according to claim 31 30, wherein

~~said specifying means detects as the intensity of said first light the intensity of first light emitted from a fluorescent protein expressed together with said protein, to specify said noted region; and~~

~~said selection means detects the intensity of second light emitted from a fluorescent probe for measuring intracellular reactions, introduced into said specimen, to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted region, as the intensity of said second light.~~

the second extracting member extracts said all cell colonies from a picture image of said sample captured by a phase-contrast microscope.

Claims 35-39 (Canceled).

Claim 40 (New): The intracellular-reaction measuring apparatus according to claim 30, wherein said first extracting member counts the number of said expressed cells, said second extracting member counts the number of cells of each cell colony, and said specifying member specifies said cell colony which is extracted by the second extracting member and contains said expressed cells extracted by the first extracting member, and then said specifying member selects said cell colony containing said expressed cells extracted by the first extracting member with a larger number than said stated standard with respect to the number of cells of said cell colony counted by the second extracting member.

Claim 41 (New): The intracellular-reaction measuring apparatus according to claim 30, wherein said photo-detecting means is a cooled imaging device, said cooled imaging device captures a fluorescent image by detecting fluorescence from said cells, and said first and second extracting members extract cells on the basis of brightness information of said fluorescent image.